ary degeneration brought about by invasion and compression of the surrounding tissues, the pathological progress finally becoming a general one.

The first symptom exhibited by the patient was that of neuritis over distinct areas, then changes in the appearance of the skin, with hyperæsthesia followed by analgesia. The qualitative and quantitative electrical tests of the upper extremities gave an interesting result. The disease of the nerves showed a predilection for the wrist and elbow of both sides, the ulnar nerve being much swollen. There were no fibrillary tremors over this region. The reflex of the triceps and forearm was weak. Examination of the lower extremities gave negative results. There were no spinal or cerebral symptoms. The ulnar and median nerve on the left side gave weak contractions. Reaction to galvanism was lost. Movements of the fingers, especially those controlled by the thenar and hypothenar group, were slow and difficult. Resection was made of a portion of the ulnar nerve and of the first interosseous muscle. Macroscopically, it appeared normal, but microscopically the condition was worthy of note. Sections showed marked degeneration in various localities; in one place the fibres might be intact, in another destroyed. The inflammation seemed to extend along the nerve trunk, its ramifications holding out longer against the pernicious germ. The lepra bacilli were found disseminated among the nerve fibres. The degeneration of the muscle was limited at first to various bundles of nerves, usually those of the periphery. The article was accompanied by several drawings which showed very clearly how the bacilli invaded the nerve bundles, one cross section showing the various stages in the degenerative processes throughout the nerve structure and muscle. The neurilemma and the perimysium were the last structures to resist the onslaught of the leprous process. B. M.

THERAPEUTICAL.

Modern Treatment of Idiocy.—*In the Progrès Medical*, June 24, 1893, there is a most interesting illustrated paper by Bourneville on the treatment of idiocy and imbecility.

Idiocy is classified as symptomatic of hydrocepalus, arrested development of convolutions, congenital or pathological malformations of the brain, meningitis or meningo-encephalitis, hyperthrophic sclerosis, atrophic sclerosis, myxœda, or cerebral tumors. Bourneville's paper contains a comparative study of the skulls and photographed brains of twenty-two idiotic children, of ages averaging from two to seventeen, their condition of mental inferiority being dependent upon different causes, and their death due to a variety of diseases. These children were all typical idiots and belonged to the same category as the twenty-five patients operated upon by Lannelogue. Treatment was that originated by the late Dr. Seguin and brought to greater technical perfection by Bourneville, and combined medical, hygienic, and pedagogic measures. The children learn through activities, by doing things and making things. They are first taught to stand erect, to walk properly, to wash their faces and hands, to dress themselves, to lace their shoes and perform other complicated acts. These object lessons are given upon the manikin or upon one of the little patients. The joints are exercised, the muscles are rubbed, baths are administered, and all the arts of hydro-therapy are employed. For the development of speech and correct pronunciation, methods in vogue in deaf and dumb asylums are utilized. Every device is employed to render numbers and calculations real and intelligible. Exercise in the training of vision are further carried on out of doors in gardens or plots laid out with this object in view. There are gardens of surfaces, of geometric figures, flower gardens, vegetable gardens, orchards, fields of grain, vineyards, etc.

Music occupies an important place in this scheme of mental and moral development. There are songs and movements, games and lessons in vocal and instrumental music for the advanced pupils. Physical culture is carried on by means of systematized mechanical movements, free gymnastics, fencing and dancing. Technical training for a trade completes the course of instruction. There are seven workshops. The pupils learn carpentry and locksmith work, printing, tailoring, the making of shoes, baskets, brushes, twine, etc. The results of this medico-pedagogic system of education are most surprising and encouraging.

Bourneville calls attention to the fact that many backward and imbecile children are moral imbeciles. They are unstable, perverse, impulsive, disorderly and wayward. They reach a certain stage of development, a moderate intellectual capacity. The moral qualities are in abeyance; and moral imbeciles have as much mind as is consistent or possible with a total absence of character. Bourneville's wide experience and unusual field of observation gives unquestioned weight to conclusions that differ in certain particulars from the theories of other observers. The following embodies six important points unpon which the author lays great stress: (I) The surgical treatment of idiocy rests upon a hypothesis not substantiated by pathological anatomy. (II) In the different forms of idiocy premature ossification of the cranial sutures does not exist. Partial synostosis is quite exceptional. (III) Lesions causing idiocy are generally profound, extensive and varied, and most unlikely to be influenced by craniectomy. (IV) Our present means of investigation are not such that a diagnosis of premature ossification and thickness of the skull can be made. (V) Reports of most surgeons show that results of operations are negative, slight or doubtful. Serious accidents, as paralysis, convulsions or death may follow surgical interference. (VI) Medico-pedagogic treatment, founded by Seguin and improved by the introduction of new processes, permits a decided amelioration always, and often enables idiotic children to occupy some social station. L. F. B.

The Effect of "Suspension Treatment" on the Visual Disturbances in Spinal Cord Affections. —Bechterew (Neurolog. Centralblatt., No. 7, 1893), has observed a remarkable improvement in vision as a result of suspension. He reports three cases. In one case of tabes, the sight was markedly diminished in both eyes, but the patient could see much better and was able to read without glasses immediately after each suspension. There was also decided improvement in another tabetic in whom there was distinct optic atrophy.

In the third case there was tuberculous disease affecting the brain and spinal cord. The vision in the right eye was defective and both optic nerves were hyperæmic.

Both the visual field and the acuity of vision were improved. In explanation of the effect of suspension, he is of the opinion that it is best explained by the production of increased blood pressure and active cerebral hyperæmia. W. M. L.